

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
16 December 2004 (16.12.2004)

PCT

(10) International Publication Number  
**WO 2004/109143 A1**

(51) International Patent Classification<sup>7</sup>: **F16D 65/853**,  
55/228

Australia 6021 (AU). **MORLEY, Vin, C.** [AU/AU]; Suite  
3, 75 Erindale Road, Balcatta, Western Australia 6021  
(AU).

(21) International Application Number:  
PCT/AU2004/000756

(74) Agent: **GRIFFITH HACK**; Level 6, 256 Adelaide Ter-  
race, Perth, Western Australia 6000 (AU).

(22) International Filing Date: 4 June 2004 (04.06.2004)

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2003902857 6 June 2003 (06.06.2003) AU

(71) Applicant (for all designated States except US): **SAFE  
EFFECT PTY LTD** [AU/AU]; Suite 3, 75 Erindale Road,  
Balcatta, Western Australia 6021 (AU).

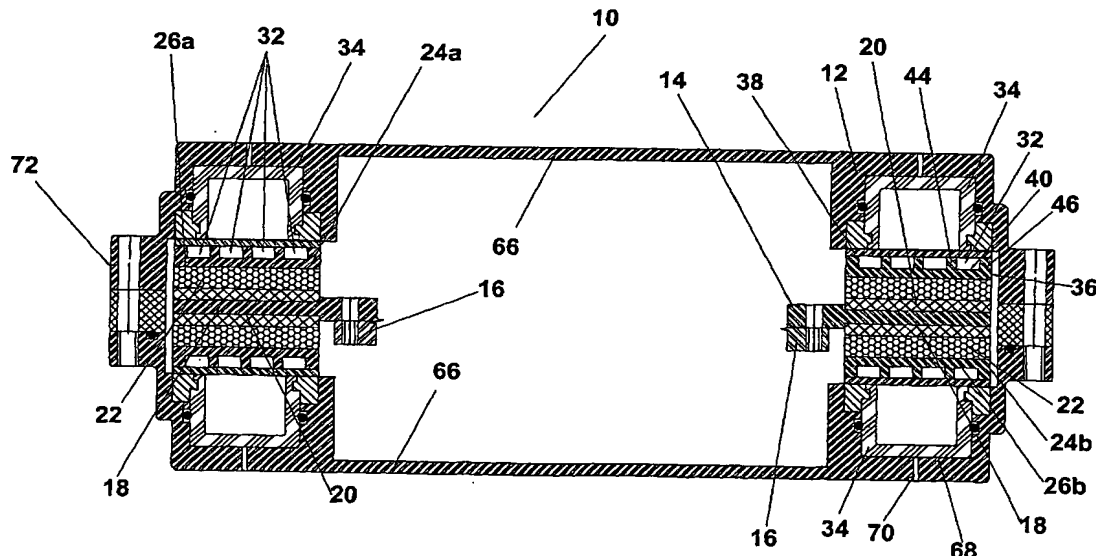
(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **NOWAK, Stan**  
[AU/AU]; Suite 3, 75 Erindale Road, Balcatta, Western  
Australia 6021 (AU). **KIERONSKA, Dorota, Helena**  
[AU/AU]; Suite 3, 75 Erindale Road, Balcatta, Western

[Continued on next page]

(54) Title: FLUID COOLED WET BRAKE SYSTEM



(57) Abstract: Fluid cooled wet brake system (10) comprises a sealed housing (12) containing a volume of lubricating oil, a disc (14) disposed in the housing (12) and adapted for fixing to a rotating body such as a wheel hub (16), and one or more stators (24). The stators (24) are rotationally fixed but slidably mounted within the housing (12) and can be pushed into contact with respective braking surfaces (26) of the discs by conventional brake pistons (34). The stators are provided with a fluid inlet (28), a fluid outlet (30) and one or more fluid flow paths (32) extending between the inlet (28) and the outlet (30) through which a cooling fluid flows.



**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*